

537,771
10/537771

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/053289 A1

(51) International Patent Classification⁷: **E21B 33/126**

William [CA/CA]; 1831 104A Street NW, Edmonton,
Alberta T6J 5C1 (CA).

(21) International Application Number:
PCT/CA2003/001890

(74) Agent: **BENNETT JONES LLP**; Roseann Caldwell,
4500 Bankers Hall East, 855 - 2nd Street SW, Calgary,
Alberta T2P 4K7 (CA).

(22) International Filing Date: 8 December 2003 (08.12.2003)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
60/431,227 6 December 2002 (06.12.2002) US
2,444,648 9 October 2003 (09.10.2003) CA

(71) Applicant (*for all designated States except US*): **TESCO
CORPORATION** [CA/CA]; 6204 - 6A Street SE, Calgary,
Alberta T2H 2B7 (CA).

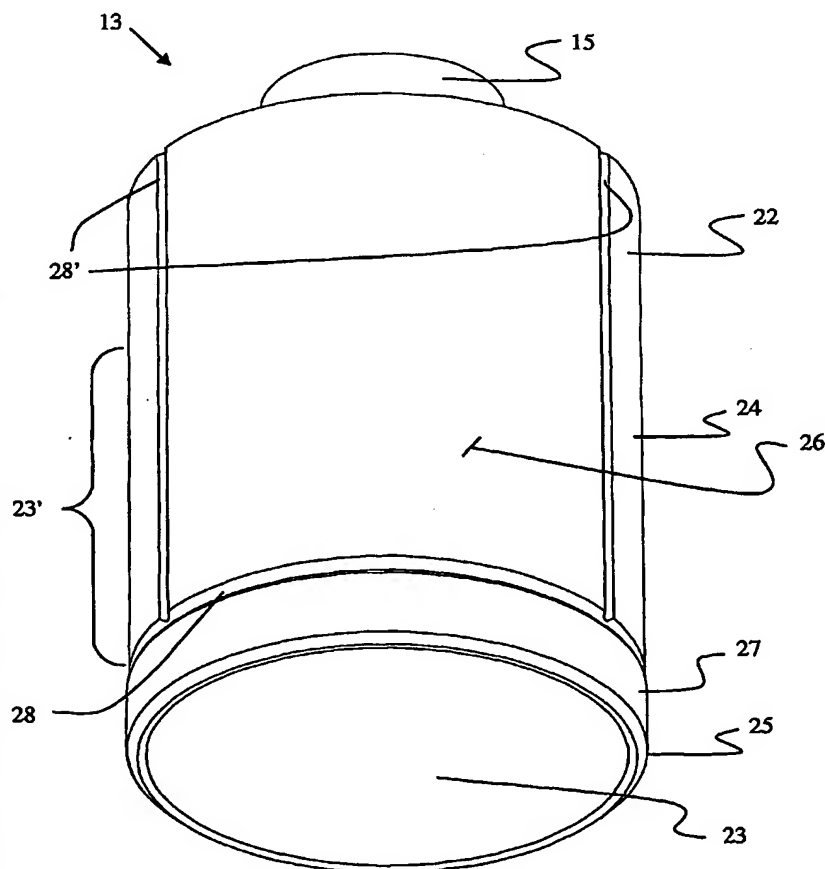
(84) Designated States (*regional*): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **SLACK, Maurice,**

[Continued on next page]

(54) Title: SEAL CUP FOR A WELLBORE TOOL AND METHOD



(57) Abstract: A seal cup and method is disclosed that can be used on a wellbore tool. The seal cup includes an external circumferential seal land adjacent the cup lip and an outer surface capable of permitting drainage away from the seal land of fluids, which may seep past the seal land. This acts against pressure invasion in the interfacial contacting region between the seal cup and the structure, for example, a wellbore liner against which it is sealed.

WO 2004/053289 A1

WO 2004/053289 A1



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*

INTERNATIONAL SEARCH REPORT

International Application No

PC 03/01890

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E21B33/126

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 1 730 804 A (CHRISTENSON JR GEORGE E) 8 October 1929 (1929-10-08) figure 1	1,8,15
A	US 3 346 267 A (FARLEY DAVID L) 10 October 1967 (1967-10-10) figures 1-4	1,8,15
A	US 3 940 938 A (DURHAM DONALD F ET AL) 2 March 1976 (1976-03-02) figure 3	1,8,15



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

22 March 2004

Date of mailing of the international search report

30/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Schouten, A

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/CA 03/01890

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 1730804	A	08-10-1929	NONE	
US 3346267	A	10-10-1967	NONE	
US 3940938	A	02-03-1976	BE 832255 A1	09-02-1976
			BR 7505072 A	03-08-1976
			CA 1030193 A1	25-04-1978
			GB 1466203 A	02-03-1977
			JP 51042873 A	12-04-1976